In the claims:

1. (Currently amended) A fuel cell, comprising:

a substrate; and

a patterned film established ~~deposited~~ on the substrate, the patterned film having a plurality of nanowires dispersed therein;

wherein the plurality of nanowires enhances catalytic activity and conductivity of the patterned film.

2. (Original) The fuel cell as defined in claim 1 wherein the plurality of nanowires increases the number of sites per unit volume where catalysis takes place.

3. (Original) The fuel cell as defined in claim 1 wherein the substrate is an electrolyte.

4. (Original) The fuel cell as defined in claim 3 wherein the electrolyte is at least one of oxygen ion conducting membranes, proton conductors, carbonate (CO_3^{2-}) conductors, OH^- conductors, cubic fluorite structures, doped cubic fluorites, proton-exchange polymers, proton-exchange ceramics, yttria-stabilized zirconia, samarium doped-ceria, gadolinium doped-ceria, $La_aSr_bGa_cMg_dO_{3-\delta}$, and mixtures thereof.

5. (Original) The fuel cell as defined in claim 1 wherein the substrate is at least one of single crystal silicon, polycrystalline silicon, silicon oxide containing dielectric substrates, alumina, sapphire, ceramics, cermets, anode materials, cathode materials, current collector materials, and mixtures thereof.

6. (Original) The fuel cell as defined in claim 1 wherein the plurality of nanowires is formed from at least one of carbon, copper, nickel, platinum, gold, iron, alloys thereof, stainless steel, lanthanum strontium chromite, current collector materials, electrode materials, catalyst materials, electrolyte filament materials, and mixtures thereof.

7. (Original) The fuel cell as defined in claim 6 wherein the current collector material comprises high temperature metals.

8. (Original) The fuel cell as defined in claim 7 wherein the high temperature metals are at least one of gold, copper, stainless steel, nickel alloys, and mixtures thereof.

9. (Currently amended) The fuel cell as defined in claim 1 wherein the patterned film comprises an anode.

10. (Original) The fuel cell as defined in claim 9 wherein the plurality of nanowires comprises metallic components of anode material.

11. (Original) The fuel cell as defined in claim 10 wherein the anode metallic components comprise at least one of nickel-copper alloys, platinum, palladium, ruthenium, alloys thereof, and mixtures thereof.

12. (Currently amended) The fuel cell as defined in claim 1 wherein the patterned film comprises a cathode.

13. (Original) The fuel cell as defined in claim 12 wherein the plurality of nanowires comprises metallic components of cathode material.

14. (Original) The fuel cell as defined in claim 13 wherein the cathode metallic components comprise at least one of rhodium, platinum, silver, alloys thereof, and mixtures thereof.

15. (Currently amended) The fuel cell as defined in claim 1 wherein the plurality of nanowires is randomly oriented throughout the patterned film.

16. (Original) The fuel cell as defined in claim 1 wherein the plurality of nanowires has a diameter ranging between about 1 nm and about 100 nm.

17. (Original) The fuel cell as defined in claim 1 wherein the plurality of nanowires has a diameter ranging between about 10 nm and about 50 nm.

18. (Original) The fuel cell as defined in claim 1 wherein the plurality of nanowires has a length ranging between about 15 nm and about 2000 nm.

19. (Original) The fuel cell as defined in claim 1 wherein the plurality of nanowires has a length ranging between about 100 nm and about 500 nm.

20. (Original) An electronic device, comprising:

a load; and

the fuel cell of claim 1 connected to the load.

21 – 47. (Canceled)

48. (Currently amended) A method of using a fuel cell, comprising the step of:

operatively connecting the fuel cell to at least one of an electrical load and an electrical storage device, the fuel cell comprising:

a substrate; and

a patterned film established ~~deposited~~ on the substrate, the patterned film having a plurality of nanowires dispersed therein;

wherein the plurality of nanowires enhances catalytic activity and conductivity of the patterned film.

49. (Currently amended) A fuel cell, comprising:

a substrate;

a patterned film established ~~deposited~~ on the substrate; and

means, dispersed throughout the patterned film, for substantially enhancing catalytic activity and conductivity throughout the patterned film.

50 - 64. (Canceled)

65. (New) A single chamber fuel cell, comprising:

a substrate; and

a film deposited on the substrate, the film having a plurality of nanowires therein;

wherein the plurality of nanowires enhances catalytic activity and conductivity of the film.

66. (New) A fuel cell, comprising:

a substrate; and

a film deposited on the substrate, the film having a plurality of nanowires therein;

wherein the plurality of nanowires is connected to at least one of catalytic nano-particles or electrolyte grains;

and wherein the plurality of nanowires enhances catalytic activity and conductivity of the film.

67. (New) A fuel cell, comprising:

a substrate; and

a film deposited on the substrate, the film having a plurality of nanowires therein;

wherein each of the plurality of nanowires is formed from electrolyte filament materials, and wherein cathode material nanoparticles are dispersed on and connected to the electrolyte filament material nanowires.